

REMARKS

Applicant has amended claims 1, 26, 27, 29, 38, and 45. Claims 2-18, 30-37, 40-44, and 48 stand withdrawn.

I. REJECTIONS UNDER 35 U.S.C. § 112

Applicant respectfully traverses the Examiner's rejection of claims 27-29, 38-39, and 45-47 under 35 U.S.C. § 112, second paragraph, for failing to distinctly claim the subject matter which Applicant regards as the invention. Claim 27 is amended to replace "an output end of the shredding mechanism" with "an output end of the shredding mechanism." This amendment of claim 27 renders the claim proper and not confusing.

Claim 38 is amended to replace "wherein the means for spraying further comprises an electrical switching device for activating the means for spraying" with "wherein said apparatus further includes means for spraying that has an electrical switching device for activating the means for spraying." This amendment of claim 38 provides proper antecedent basis for the "means for spraying" limitation.

Claim 45 is amended to delete the word "pressure" from line 4 of the claim. This amendment overcomes the Examiner's rejection of claim 45 for being confusing and indefinite in describing the bottom portion, and places the claim in condition for allowance.

Dependent claims 28 and 29 depend upon amended claim 27, and thus, incorporate by reference all of the elements and limitations of claim 27. 35 U.S.C. § 112, fourth paragraph. Likewise, dependent claim 39 depends upon amended claim 38 and dependent claims 46 and 47 depend upon amended independent claim 45. Said claims thereby

incorporate by reference all of the elements and limitations of the preceding claims upon which they depend. Id. Claims 27, 38, and 45 are amended herein to correct the deficiencies pointed out by the Examiner and to place said claims in condition for allowance. Therefore, the Examiner's rejection of Applicant's claims 27-29, 38-39, and 45-47 under 35 U.S.C. § 112, second paragraph, cannot be sustained. Applicant respectfully requests that the Examiner withdraw these rejections and allow said claims.

#### **II. REJECTIONS UNDER 35 U.S.C. § 102(b)**

Applicant respectfully traverses the Examiner's rejection of claims 1, 19, and 38 under 35 U.S.C. § 102(b) as being anticipated by Cann et al., U.S. Patent No. 5,533,955. Applicant has amended independent claim 1 to delete the phrase "comprising a suction housing" from the "means for producing suction" limitation of said claim. By removing this structural language from the claim, claim 1 is rendered a means-plus-function claim. In light of this amendment, the Examiner has not demonstrated that the Cann reference discloses the means for producing suction claimed by Applicant. The means for producing suction element of claim 1 must be construed to cover the corresponding structure and material described in the specification and equivalents thereof. 35 U.S.C. § 112, sixth paragraph. Referring to paragraph [56] of the specification, Applicant discloses that the means for producing suction element of claim 1 comprises a suction housing 90. The suction housing 90 includes a vortex box 92 located within its interior. See Applicant's specification, paragraph [57], and Figures 1A and 1B. Said suction housing 90 also includes an upper (or top) portion 94 having fans 113 and a lower (or bottom) portion 98 mounted below said upper portion. Id. Positive pressure is created in

the upper portion 94 to induce a downward flow of air over the elongated strips 32 as they travel on the perforated conveyor 14. Id. Negative pressure is created in the lower portion 98 to produce negative air flow from below said perforated conveyor 14. See Applicant's specification, paragraphs [57] and [58]. The vortex box 92 of said suction housing 90 further includes rounded interior periphery corners 96 to decrease resistance in the flow of air drawn through said vortex box and parallel interior elements 100 to enhance the vortex effect. See Applicant's specification, paragraphs [57] and [58], and Figure 9A. The preferably rectangular vortex box 92 includes a plurality of chambers in the interior of the bottom portion which serve as vents to optimize the pressure of the air impinging upon the strips 32. See Applicant's specification, paragraph [59]. Said chambers are equally spaced to reduce the necessity for further cleaning of the strips. Id. Each chamber has an individual outlet within the vortex box to empty said chamber's stream of air into the main corridor of the vortex suction opening port 102. See Applicant's specification, paragraph [60], and Figure 9C. The design of the suction housing permits lighter contaminants to be separated from heavier contaminants for disposal and prevents large contaminants from blocking airflow, thereby reducing the need for stopping operation of the shredding device during cleaning. See Applicant's specification, paragraphs [60] and [61].

The Cann reference discloses a suction device (16) comprising a housing (70) with an outlet (76) connected by conduit (78) to an inlet formed in the top wall (80) of a drum (82). See Cann et al., column 5, lines 3-18. The top wall (80) mounts a vacuum pump (84) that creates a negative pressure within housing (70). Id. Clearly, these

elements are not the same as those described by Applicant's specification with respect to Applicant's means for producing suction in amended independent claim 1. Thus, the means for producing suction element of claim 1 must be construed to cover the corresponding structure and material described in the specification and equivalents thereof. In view of the descriptions of the means for producing suction contained in Applicant's specification and drawings, the Examiner has not demonstrated that the Cann reference discloses said means for producing suction as claimed by Applicant. The Examiner's rejection of claim 1 under 35 U.S.C. § 102(b) cannot be sustained.

Dependent claims 19 and 38 ultimately depend upon amended independent claim 1, and thus, incorporate by reference all of the elements and limitations of independent claim 1. 35 U.S.C. § 112, fourth paragraph. These elements and limitations include the novel means for producing suction as defined by the structures described in Applicant's specification and drawings. Therefore, the Examiner's rejection of Applicant's claims 1, 19, and 38 under 35 U.S.C. § 102(b) cannot be sustained. Applicant respectfully requests that the Examiner withdraw these rejections and allow said claims.

### **III. REJECTIONS UNDER 35 U.S.C. § 103(a)**

#### **A. Claim 39**

Applicant respectfully traverses the Examiner's rejection of claim 39 under 35 U.S.C. 103(a) as being unpatentable over Cann et al., U.S. Patent No. 5,533,955. Applicant has amended independent claim 1 to delete the phrase "comprising a suction housing" from the "means for producing suction" limitation of said claim. By removing this structural language from the claim, claim 1 is rendered a means-plus-function claim.

In light of this amendment, the Examiner has not demonstrated that the Cann reference discloses the means for producing suction claimed by Applicant. The means for producing suction element of claim 1 must be construed to cover the corresponding structure and material described in the specification and equivalents thereof. 35 U.S.C. § 112, sixth paragraph. Dependent claim 39 ultimately depends upon amended independent claim 1, and thus, incorporates by reference all of the elements and limitations of independent claim 1. 35 U.S.C. § 112, fourth paragraph. These elements and limitations include the novel means for producing suction as defined by the structures described in Applicant's specification and drawings. See current Amendment, Section II of the Remarks. Therefore, the Examiner's rejection of Applicant's claim 39 under 35 U.S.C. § 103(a) cannot be sustained. Applicant respectfully requests that the Examiner withdraw this rejection and allow said claim.

**B. Claims 20-21**

Applicant respectfully traverses the Examiner's rejection of claims 20-21 under 35 U.S.C. 103(a) as being unpatentable over Cann et al., U.S. Patent No. 5,533,955, in view of Cano et al., U.S. Patent No. 5,472,779. Applicant has amended independent claim 1 to delete the phrase "comprising a suction housing" from the "means for producing suction" limitation of said claim. By removing this structural language from the claim, claim 1 is rendered a means-plus-function claim. In light of this amendment, the Examiner has not demonstrated that the Cann references disclose the means for producing suction claimed by Applicant. The means for producing suction element of claim 1 must be construed to cover the corresponding structure and material described in

the specification and equivalents thereof. 35 U.S.C. § 112, sixth paragraph. Dependent claims 20 and 21 ultimately depend upon amended independent claim 1, and thus, incorporate by reference all of the elements and limitations of independent claim 1. 35 U.S.C. § 112, fourth paragraph. These elements and limitations include the novel means for producing suction as defined by the structures described in Applicant's specification and drawings. See current Amendment, Section II of the Remarks. Therefore, the Examiner's rejection of Applicant's claim 20 and 21 under 35 U.S.C. § 103(a) cannot be sustained. Applicant respectfully requests that the Examiner withdraw this rejection and allow said claims.

**C. Claims 20-27 and 45-47**

Applicant respectfully traverses the Examiner's rejection of claims 20-27 and 45-47 under 35 U.S.C. 103(a) as being unpatentable over Cann et al., U.S. Patent No. 5,533,955, in view of Campbell et al., U.S. Patent No. 5,156,075. Applicant has thoroughly reviewed the Campbell reference and finds that said reference does not rounded corners or parallel interior elements as stated by the Examiner on page 5 of the current Office Action. Column 3, lines 45-49, of the Campbell reference describe a chute (46) defined by a top outer wall (44), an inner wall (52), and end plates (48) and (50). These parts of the Campbell invention merely describe the four walls of the chute (44) and do not describe the vortex box 92 and its components located within the interior of the suction housing 90 as described by Applicant's specification. See Campbell et al., column 3, lines 45-49, and Figures 1 and 2. Moreover, the rounded corners, which the Examiner describes as part of the Campbell invention, are tapered sections (54) of the

chute (46), which connect said chute to circular duct (56). In the specification of the present application, Applicant describes the rounded interior periphery corners 96 included within the vortex box 92 of said suction housing 90 to decrease resistance in the flow of air drawn through said vortex box and parallel interior elements 100 to enhance the vortex effect. See Applicant's specification, paragraphs [57] and [58], and Figure 9A. Clearly, the rounded periphery corners 96 and parallel interior elements 100 of Applicant's specification differ markedly from the four walls and tapered sections (56) defining Campbell's chute (46). Therefore, the Examiner's rejection of Applicant's claims 20-27 and 43-47 under 35 U.S.C. § 103(a) cannot be sustained. Applicant respectfully requests that the Examiner withdraw this rejection and allow said claims.

In addition, Applicant has amended independent claim 1 to delete the phrase "comprising a suction housing" from the "means for producing suction" limitation of said claim. By removing this structural language from the claim, claim 1 is rendered a means-plus-function claim. In light of this amendment, the Examiner has not demonstrated that the cited references disclose the means for producing suction claimed by Applicant. Likewise, amended independent claim 43 also includes an element describing a means for producing suction. The means for producing suction element of claims 1 and 43 must be construed to cover the corresponding structure and material described in the specification and equivalents thereof. 35 U.S.C. § 112, sixth paragraph. Dependent claims 20-27 ultimately depend upon amended independent claim 1, and thus, incorporate by reference all of the elements and limitations of independent claim 1. 35 U.S.C. § 112, fourth paragraph. Dependent claims 46 and 47 ultimately depend upon

independent claim 45, and thus, incorporate by reference all of the elements and limitations of independent claim 45. *Id.* These elements and limitations include the novel means for producing suction as defined by the structures described in Applicant's specification and drawings. See current Amendment, Section II of the Remarks. Therefore, the Examiner's rejection of Applicant's claims 20-27 and 45-47 under 35 U.S.C. § 103(a) cannot be sustained. Applicant respectfully requests that the Examiner withdraw this rejection and allow said claims.

**D. Claims 28-29**

Applicant respectfully traverses the Examiner's rejection of claims 28-29 under 35 U.S.C. 103(a) as being unpatentable over Canni *et al.*, U.S. Patent No. 5,533,955, in view of Campbell *et al.*, U.S. Patent No. 5,156,075, and further in view of Ratzel, U.S. Patent No. 5,906,569. As explained in Section III.C. above, the rounded periphery corners 96 and parallel interior elements 100 describing the means for producing suction disclosed in Applicant's specification differ markedly from the four walls and tapered sections (56) defining Campbell's chute (46). Moreover, the Ratzel reference merely describes an exhaust port (58) connected to a vacuum for withdrawing and collecting paper articles. See Ratzel, column 6, lines 31-33, and Figures 1 and 2. Ratzel does not claim or describe the means for producing suction as described in Applicant's specification.

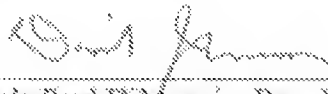
Applicant has amended independent claim 1 to delete the phrase "comprising a suction housing" from the "means for producing suction" limitation of said claim. By removing this structural language from the claim, claim 1 is rendered a means-plus-



function claim. In light of this amendment, the Examiner has not demonstrated that the cited references disclose the means for producing suction claimed by Applicant. The means for producing suction element of claim 1 must be construed to cover the corresponding structure and material described in the specification and equivalents thereof. 35 U.S.C. § 112, sixth paragraph. Dependent claims 28 and 29 ultimately depend upon amended independent claim 1, and thus, incorporate by reference all of the elements and limitations of independent claim 1. 35 U.S.C. § 112, fourth paragraph. These elements and limitations include the novel means for producing suction as defined by the structures described in Applicant's specification and drawings. See current Amendment, Section II of the Remarks. Therefore, the Examiner's rejection of Applicant's claims 28 and 29 under 35 U.S.C. § 103(a) cannot be sustained. Applicant respectfully requests that the Examiner withdraw this rejection and allow said claims.

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Respectfully submitted,



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